wherein the wastes have been thermally decomposed into the substantially harmless gases.

2. (Amended) The thermal decomposition apparatus according to claim 1, further comprising [oxygenless state forming] means for placing said heating chamber in an oxygenless [state] environment such that said plurality of balls are placed in an oxygenless environment [state].

3. (Amended) The thermal decomposition apparatus according to claim 1, further comprising [decompressing] means for decompressing said heating chamber such that said plurality of balls are placed in a vacuum [state].

4. (Twice Amended) The thermal decomposition apparatus according to claim 1, wherein said plurality of balls are each made of a material [at least one] selected from the group consisting of charcoal, graphite, [and] a carbon composite material, and mixtures thereof.

5. (Twice Amended) The thermal decomposition apparatus according to claim 1, wherein each of said plurality of [plurality of] balls [each have impermeability] is impermeable.

6. (Twice Amended) The thermal decomposition apparatus according to claim 1, wherein said plurality of balls each take the form of a [perfect] sphere.

7. (Twice Amended) The thermal decomposition apparatus according to claim 1, further comprising [pressing] means, provided within said heating chamber, for pressing the wastes against said plurality of balls.

8. (Twice Amended) The thermal decomposition apparatus according to claim 1, further comprising a filter made of a material selected from the group consisting [at least one] of [activate] active carbon, [and] charcoal, and mixtures thereof [for allowing the decomposed gases to pass therethrough].

9. (Twice Amended) The thermal decomposition apparatus according to claim 1, further comprising:

a vacuum meter for measuring the pressure within said heating chamber[,]; and

[pressure adjusting] means for adjusting the pressure within said heating chamber to a predetermined value.

10. (Twice Amended) The thermal decomposition apparatus according to claim 1, further comprising an intervening spacer which [contain] contains carbon as a main ingredient, the intervening spacer being placed [at least] between said plurality of balls and an inner wall of said heating chamber.

11. (Twice Amended) The thermal decomposition apparatus according to claim 1, wherein at least portions of [the] an inner wall of said heating chamber [which] are placed in contact with said plurality of balls, and wherein at least portions of the inner wall are [is] made of a monolithic refractory material [which contains at least one] selected from the group consisting of boron nitride, niobium, silicon carbide, boron carbide, magnesium oxide, hafnium oxide, hafnium dioxide, [and] beryllium aluminum oxide, and mixtures thereof.

14. (Twice Amended) The thermal decomposition apparatus according to claim 1, further comprising a decomposed gas harm eliminating device for thermally decomposing harmful materials remaining in the decomposed gases into harmless gases, the decomposed gas harm eliminating device comprising:

a decomposed gas heating chamber for heating the decomposed gases;

a decomposed gas inlet port for introducing the decomposed gases into said decomposed gas heating chamber;

at least one pair of second electrodes provided within said decomposed gas heating chamber;

a second light emitting heater consisting of a plurality of second balls which contain carbon as a main ingredient, provided between said at least one pair of

second electrodes so as to produce an electric discharge when a voltage is applied across said at least one pair of second electrodes;

a harmless gas outlet port for discharging [out of said decomposed gas heating chamber] harmless gases to which the decomposed gases [are] have been rendered [harmless]; and

a filter comprising a material selected from the group consisting [at least one] of active carbon, [and] charcoal, and mixtures thereof [for allowing the harmless gases pass therethrough].

15. (Amended) The thermal decomposition apparatus according to claim 14, wherein said decomposed gas harm eliminating device further [comprising at least one of] comprises:

a second vacuum meter for measuring the pressure within said decomposed gas heating chamber; [,] and

second [pressure adjusting] means for adjusting the pressure within said decomposed gas heating chamber to a predetermined value[;].

[a second intervening spacer which contain carbon as a main ingredient, placed at least between said plurality of second balls and the inner wall of said decomposed gas heating chamber;

at least portions of the inner wall of said decomposed gas heating chamber which are placed in contact with said plurality of second balls being made of a monolithic refractory which contains at least one selected from the group of boron nitride, niobium, silicon carbide, boron carbide, magnesium oxide, hafnium oxide, hafnium dioxide, and beryllium aluminum oxide; and

a second pair of electrodes having at least a part thereof in the form of a rod or horn surrounded by said plurality of second balls.]

Please add the following new claims:

16. (New) The thermal decomposition apparatus according to claim 14, wherein said decomposed gas harm eliminating device further comprises a second intervening spacer which contains carbon as a main ingredient, placed at least

between said plurality of second balls and the inner wall of said decomposed gas heating chamber.

17. (New) The thermal decomposition apparatus according to claim 14, wherein said decomposed gas harm eliminating device further comprises at least portions of the inner wall of said decomposed gas heating chamber which are placed in contact with said plurality of second balls being made of a monolithic refractory material selected from the group consisting of boron nitride, niobium, silicon carbide, boron carbide, magnesium oxide, hafnium oxide, hafnium dioxide, beryllium aluminum oxide, and mixtures thereof.

18. (New) The thermal decomposition apparatus according to claim 14, wherein said decomposed gas harm eliminating device further comprises a second pair of electrodes having at least a part thereof in the form of a rod or horn surrounded by said plurality of second balls.

REMARKS

Entry of this voluntary preliminary amendment is respectfully requested.

Further and favorable consideration is requested. If the Examiner believes it would expedite prosecution of the above-identified application, the Examiner is cordially invited to contact Applicants' Attorney at the below-listed telephone number.

Respectfully submitted,

YOUNG & BASILE, P.C.

Julia Church Dierker
Attorney for Applicants
Registration No. 33368
(248) 649-3333

3001 West Big Beaver Rd., Suite 624
Troy, Michigan 48084
Dated: January 16, 2001
JCD/tlw